UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/724,373	11/28/2000	Nancy L. Saxon	60,130-868	9170

26096 7590 03/09/2004

CARLSON, GASKEY & OLDS, P.C.
400 WEST MAPLE ROAD
SUITE 350
BIRMINGHAM, MI 48009

EXAMINER	
GIBSON, RANDY W	

ART UNIT	PAPER NUMBER
2841	

DATE MAILED: 03/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/724,373	SAXON ET AL.
	Examiner	Art Unit
	Randy W. Gibson	2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 October 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed February 2, 2004 have been fully considered but they are not persuasive with regards to the reference to Hamilton.

Applicant states that "the position sensors (120) of Hamilton are not used for determining the position of an axle component of a vehicle." First of all, the examiner notes that the recited intended use of the position sensors does not carry any patentable weight in this context because the functional language recited does not define any structure -- since the language being referred to in the claim is not in the means plus function format required by paragraph 6 of section 112. It has been held that a mere recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

The applicant states that "the position sensors (120) of Hamilton provide the reference points, i.e. spring height, necessary to provide the load on each spring." Exactly how this is different from applicant's limitation in claim 9 that "a position sensor in communication with an evaluation unit for determining the position of a component" is unclear. Looking to the written description to determine how to interpret this claim limitation, the examiner notes that the applicant himself states on pages 5 & 6 that:

" Dynamic features of truck 20 are also monitored and evaluated. Trailer ride height, and kingpin to axle distances are a few of the dynamic inputs that are examined. A person skilled in the art would know a number of other dynamic as well as static features that may be used to monitor and evaluate load distribution....

...The invention allows the truck driver to readily optimize his vehicle for performance and compliance with load limits. For example, a driver loads at a loading dock with trailer 40 in the farthest rearward position. After loading, the driver examines display 52 and queries evaluation unit 36 to optimize truck 20 for city driving. Evaluation unit 36 reads signals from load sensors 24A-24J and position sensors 44A-E, 48, and 50. After reading and evaluating these sensors with load optimization data, display 52 then provides the truck driver with the optimal position of trailer 40 for the given load distribution for city driving. Display 52 also warms truck driver of any axle overload conditions or state and federal load limit violations. Additionally, optimal tire pressure and braking ratio is also displayed. After each delivery of load from the truck, the driver can continue to query evaluation unit 36 to configure truck 20 for optimal performance by repositioning load and/or repositioning components of truck 20. [emphasis added]"

It appears from applicant's own description that when he determines the "desired position of a vehicle component relative to a vehicle body", all that he is really doing is

adjusting trailer height -- at least in the embodiment where the component is an axle (the examiner will discuss location of the kingpin later). If the applicant means something else, the written description does not say. Exactly how this is different from what Hamilton is doing is unclear from the language of claims 9 & 10 since there is no suggestion in the written description or the art of record regarding just how else one would adjust the position of the axle ("vehicle component") relative to the rest of the vehicle (I.E.: "readjust"). The examiner notes that one of Hamilton's stated purposes is to adjust trailer height based on trailer loading ("To raise the chassis, the air spring or springs are inflated ...by suitable controls. The pressure of the compressed air within the spring rises resulting in a corresponding lifting of the chassis by the air springs ... If the cargo or passengers are not evenly loaded on the chassis, the pressure of one or several of the air springs must be adjusted to maintain the chassis level. Accordingly, sensors such as position transducers or proximity switches must be provided at some or all of the air springs if automatic control is to be achieved."). Certainly, the language of claims 9 & 10 is broad enough to read on the system disclosed by Hamilton. Of course, adjusting trailer position when read in light of the written description could also mean adjusting the position of the kingpin relative to the tractor body so that the trailer sits father back as stated on page 5 of the written description, *supra*, and expressly stated in claim 11, but this embodiment was covered in the 103 rejections which the applicant did not address.

Applicant also states that "the position sensors (120) of Hamilton are selectively activated and inactivated to determine the relative height of the chassis with respect to

the ground (col. 12, lines 10-15). Claim 9 by contrast, requires 'a position sensor in communication with an evaluation unit for determining the position of a component' for optimizing vehicle loading." Exactly what this argument means is unclear since the language quoted from claim 9 seems to say nothing about the duration of activation, or inactivation, of the position sensors. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Regarding the claim limitation of a memory unit, the applicant states:

> "The memory unit (74) of Hamilton does not store optimization data. Instead, the memory unit (74) of Hamilton is a back-up unit utilized in the event of a power failure for storing a load determined from the calibration cycle (Col. 7. lines 59-63). Claim 9, by contrast, requires 'a memory unit for storing optimization data.' "

Exactly what the difference is between a "back-up unit...for storing [calibration data]" and "a memory for storing load optimization data" is unclear. Second of all, the microprocessor of Hamilton has several working memories, or RAMs, to store data (Col. 7, lines 34-66) which could easily be read onto applicant's broad limitation in claim 9 of having "a memory", so the applicant's myopic focus on EEPROM 74 and its intended use is poorly explained. Third of all, even if it is determined that "load optimization data" and "calibration data" are different things, the intended use for the "memory" recited in claim 9 does not carry any patentable weight in this context because the functional language recited does not define any structure. It has been held that a mere recitation

of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

> "Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. The following are examples of language that may raise a question as to the limiting effect of the language in a claim:
>
> (A) statements of intended use or field of use,
>
> (B) 'adapted to' or 'adapted for' clauses,
>
> (C) 'wherein' clauses, or
>
> (D) 'whereby' clauses.
>
> This list of examples is not intended to be exhaustive."
>
> from *MPEP* § 2106, "Patentable Subject Matter - Computer Related Inventions" (II)(C) [emphasis in the original].

The other rejections which are not repeated below have been dropped.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamilton et al (U.S. # 4,651,838). Hamilton et al discloses the claimed invention including at least one load sensor (65), a memory unit (74) for storing load optimization data (Col. 8, lines 25-35), and a position sensor (120) for determining the position of an axle component of the vehicle for optimizing vehicle loading (Col. 8, lines 25-40, & Col. 12, lines 3-68).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stevenson (U.S. # 5, 167,289) in view of Hamilton et al (U.S. # 4,651,838). As acknowledged by the applicant in his reply brief, the only difference between the apparatus disclosed by Stevenson and the claimed invention is the use of position sensors. However, Hamilton et al teach that it is preferable to use position sensors in connection with weight detecting pressure sensors to insure that the vehicle is level and that the air bag suspension is properly inflated before taking pressure readings (Col. 12, lines 3-68). It would have been obvious to the ordinary practioner to modify the apparatus of Stevenson to include position sensors, as taught by Hamilton et al, to

insure that the vehicle was in a condition to insure that accurate weight readings could be taken.

6. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kyrtsos (U.S. # 6,363,331 B1) in view of Hamilton et al (U.S. # 4,651,838). Kyrtsos discloses an air suspension pressure weight sensor (Col. 2,.lines 35-48), a memory unit for storing load optimization data (Col. 2, lines 49-57; Col. 3, lines 36-57). As acknowledged by the applicant in his reply brief, the only difference between apparatus disclosed by Kydsos and the claimed invention is the use of position sensors. However, Hamilton et al teach that it is preferable to use position sensors in connection with weight detecting pressure sensors to insure that the vehicle is level and that the air bag suspension is properly inflated before taking pressure readings (Col. 12, lines 3-68). It would have been obvious to the ordinary practioner to modify the apparatus of Kydsos to include position sensors, as taught by Hamilton et al, to insure that the vehicle was in a condition to insure that accurate weight readings could be taken.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton et al (U.S. # 4,651,838) in view of Wagner (U.S. # 4,854,407), Schmidt (U.S. 4,103,752), Breed et al (U.S. # 6,242,701 B1), and Schedrat et al (U.S. # 5,526,702). As discussed above, Hamilton et al discloses the claimed invention except for the position sensor for determining the position of the kingpin assembly. However, it is

known in the art that movement of the kingpin assembly requires readjustment of the calibration of the pressure weight sensors since movement of the same shifts the weight being supported among the various axles of the vehicle as shown by the examples of Wagner (Abs.; Col. 3, lines 59-68) and Schmidt (Col. 6, lines 40-51). Wagner and Schmidt both require manual readjustment, or recalibration, of the weight display device in response to the movement of the kingpin assembly. It is known in the art to use a linear variable resistor to automatically measure linear displacement of a rack assembly to allow automatic readjustment of a vehicle mounted weighing device as shown by the example of Breed et al (Col. 13, lines 22-61 and Col. 15, ln. 63 to col. 16, ln. 16). Since Schedrat et al suggest using position sensors in association with vehicle kingpin assemblies (Col. 2, lines 37-48), it would have been obvious to the ordinary practioner o use a position sensor in connection with the kingpin assembly of Hamilton et al to allow the weight display device to automatically readjust for movement of the kingpin assembly without the operator having to remember to manually readjust the display device every time he moves the kingpin assembly.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stevenson (U.S. # 5,167,289) in view of Hamilton et al (U.S. # 4,651,838) as applied to claims 9 and 10 above, and further in view of Wagner (U.S. # 4,854,407), Schmidt (U.S. 4,103,752), Breed et al (U.S. # 6,242,701 B1), and Schedrat et al (U.S. # 5,526,702). As discussed above, the combination of Stevenson and Hamilton et al disclose the claimed invention except for the position sensor for determining the position of the

kingpin assembly. However, it is known in the art that movement of the kingpin assembly requires readjustment of the calibration of the pressure weight sensors since movement of the same shifts the weight being supported among the various axles of the vehicle as shown by the examples of Wagner (Abs.; Col. 3, lines 59-68) and Schmidt (Col. 6, lines 40-51). Wagner and Schmidt both require manual readjustment, or recalibration, of the weight display device in response to the movement of the kingpin assembly. It is known in the ad to use a linear variable resistor to automatically measure linear displacement of a rack assembly to allow automatic readjustment of a vehicle mounted weighing device as shown by the example of Breed et al (Col. 13, lines 22-61 and Col. 15, ln. 63 to col. 16, ln. 16). Since Schedrat et al suggest using position sensors in association with vehicle kingpin assemblies (Col. 2, lines 37-48), it would have been obvious to the ordinary practioner to use a position sensor in connection with the kingpin assembly of Stevenson to allow the weight display device to automatically readjust for movement of the kingpin assembly without the operator having to remember to manually readjust the display device every time he moves the kingpin assembly.

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kydsos (U.S. # 6,363,331 B1) in view of Hamilton et al (U.S. # 4,651 ,838) as applied to claims 9 and 10 above, and further in view of Wagner (U.S. # 4,854,407), Schmidt (U.S. 4,103,752), Breed et al (U.S. # 6,242,701 B1), and Schedrat et al (U.S. # 5,526,702). As discussed above, the combination of Kydsos and Hamilton et al disclose the claimed invention except for the position sensor for determining the position of the kingpin

assembly. However, it is known in the ad that movement of the kingpin assembly requires readjustment of the calibration of the pressure weight sensors since movement of the same shifts the weight being supported among the various axles of the vehicle as shown by the examples of Wagner (Abs.; Col. 3, lines 59-68) and Schmidt (Col. 6, lines 40-51). Wagner and Schmidt both require manual readjustment, or recalibration, of the weight display device in response to the movement of the kingpin assembly. It is known in the art to use a linear variable resistor to automatically measure linear displacement of a rack assembly to allow automatic readjustment of a vehicle mounted weighing device as shown by the example of Breed et al (Col. 13, lines 22-61 and Col. 15, ln. 63 to col. 16, ln. 16). Since Schedrat et al suggest using position sensors in association with vehicle kingpin assemblies (Col. 2, lines 37-48), it would have been obvious to the ordinary practioner to use a position sensor in connection with the kingpin assembly of Kydsos to allow the weight display device to automatically readjust for movement of the kingpin assembly without the operator having to remember to manually readjust the display device every time he moves the kingpin assembly.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randy W. Gibson whose telephone number is (571) 271-2103. The examiner can normally be reached on Mon-Fri., 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David S Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Randy W. Gibson
Primary Examiner
Art Unit 2841